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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/373,938

DATE: 12/11/2002

TIME: 14:39:01

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF4\12112002\I373938.raw

3 <110> APPLICANT: Hallenbeck, Paul
 4 Chen, Cheauyun Theresa
 6 <120> TITLE OF INVENTION: ADENOVIRAL VECTORS INCLUDING DNA SEQUENCES ENCODING
 ANGIOGENIC INHIBITORS

8 <130> FILE REFERENCE: 4-30899P1
 10 <140> CURRENT APPLICATION NUMBER: US 09/373,938
 11 <141> CURRENT FILING DATE: 1999-08-13
 13 <160> NUMBER OF SEQ ID NOS: 17
 15 <170> SOFTWARE: PatentIn version 3.1
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 624
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Mus musculus
 22 <220> FEATURE:
 23 <221> NAME/KEY: CDS
 24 <222> LOCATION: (1)..(624)
 25 <223> OTHER INFORMATION:

W--> 28 <400> 1

| | | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 29 | atg | gag | aca | gac | aca | ctc | ctg | cta | tgg | gta | ctg | ctg | ctc | tgg | gtt | cca | 48 |
| 30 | Met | Glu | Thr | Asp | Thr | Leu | Leu | Leu | Trp | Val | Leu | Leu | Leu | Trp | Val | Pro | |
| 31 | 1 | | | | 5 | | | | 10 | | | | | 15 | | | |
| 33 | ggt | tcc | act | ggt | gac | gcg | gcc | cat | act | cat | cag | gac | ttt | cag | cca | gtg | 96 |
| 34 | Gly | Ser | Thr | Gly | Asp | Ala | Ala | His | Thr | His | Gln | Asp | Phe | Gln | Pro | Val | |
| 35 | | | | 20 | | | | | 25 | | | | | 30 | | | |
| 37 | ctc | cac | ctg | gtg | gca | ctg | aac | acc | ccc | ctg | tct | gga | ggc | atg | cgt | ggt | 144 |
| 38 | Leu | His | Leu | Val | Ala | Leu | Asn | Thr | Pro | Leu | Ser | Gly | Gly | Met | Arg | Gly | |
| 39 | | | 35 | | | | 40 | | | | | | 45 | | | | |
| 41 | atc | cgt | gga | gca | gat | ttc | cag | tgc | ttc | cag | caa | gcc | cga | gcc | gtg | ggg | 192 |
| 42 | Ile | Arg | Gly | Ala | Asp | Phe | Gln | Cys | Phe | Gln | Gln | Ala | Arg | Ala | Val | Gly | |
| 43 | | 50 | | | | | 55 | | | | | 60 | | | | | |
| 45 | ctg | tgc | ggc | acc | ttc | cgg | gct | ttc | ctg | tcc | tct | agg | ctg | cag | gat | ctc | 240 |
| 46 | Leu | Ser | Gly | Thr | Phe | Arg | Ala | Phe | Leu | Ser | Arg | Leu | Gln | Asp | Leu | | |
| 47 | 65 | | | | 70 | | | | 75 | | | | 80 | | | | |
| 49 | tat | agc | atc | gtg | cgc | cgt | gct | gac | cgg | ggg | tct | gtg | ccc | atc | gtc | aac | 288 |
| 50 | Tyr | Ser | Ile | Val | Arg | Arg | Ala | Asp | Arg | Gly | Ser | Val | Pro | Ile | Val | Asn | |
| 51 | | | | 85 | | | | | 90 | | | | 95 | | | | |
| 53 | ctg | aag | gac | gag | gtg | cta | tct | ccc | agc | tgg | gac | tcc | ctg | ttt | tct | ggc | 336 |
| 54 | Leu | Lys | Asp | Glu | Val | Leu | Ser | Pro | Ser | Trp | Asp | Ser | Leu | Phe | Ser | Gly | |
| 55 | | | | 100 | | | | | 105 | | | | 110 | | | | |
| 57 | tcc | cag | ggt | caa | gtg | caa | ccc | ggg | gcc | cgc | atc | ttt | tct | ttt | gac | ggc | 384 |
| 58 | Ser | Gln | Gly | Gln | Val | Gln | Pro | Gly | Ala | Arg | Ile | Phe | Ser | Phe | Asp | Gly | |
| 59 | | | 115 | | | | | 120 | | | | | 125 | | | | |
| 61 | aga | gat | gtc | ctg | aga | cac | cca | gcc | tgg | ccg | cag | aag | agc | gta | tgg | cac | 432 |
| 62 | Arg | Asp | Val | Leu | Arg | His | Pro | Ala | Trp | Pro | Gln | Lys | Ser | Val | Trp | His | |

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DATE: 12/11/2002

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Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF4\12112002\I373938.raw

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63      130      135      140
65 ggc tcg gac ccc agt ggg cgg agg ctg atg gag agt tac tgt gag aca      480
66 Gly Ser Asp Pro Ser Gly Arg Arg Leu Met Glu Ser Tyr Cys Glu Thr
67 145      150      155      160
69 tgg cga act gaa act act ggg gct aca ggt cag gcc tcc tcc ctg ctg      528
70 Trp Arg Thr Glu Thr Thr Gly Ala Thr Gly Gln Ala Ser Ser Leu Leu
71      165      170      175
73 tca ggc agg ctc ctg gaa cag aaa gct gcg agc tgc cac aac agc tac      576
74 Ser Gly Arg Leu Leu Glu Gln Lys Ala Ala Ser Cys His Asn Ser Tyr
75      180      185      190
77 atc gtc ctg tgc att gag aat agc ttc atg acc tct ttc tcc aaa tag      624
78 Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr Ser Phe Ser Lys
79      195      200      205
82 <210> SEQ ID NO: 2
83 <211> LENGTH: 207
84 <212> TYPE: PRT
85 <213> ORGANISM: Mus musculus
87 <400> SEQUENCE: 2
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90 1      5      10      15
93 Gly Ser Thr Gly Asp Ala Ala His Thr His Gln Asp Phe Gln Pro Val
94      20      25      30
97 Leu His Leu Val Ala Leu Asn Thr Pro Leu Ser Gly Gly Met Arg Gly
98      35      40      45
101 Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala Arg Ala Val Gly
102      50      55      60
105 Leu Ser Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg Leu Gln Asp Leu
106 65      70      75      80
109 Tyr Ser Ile Val Arg Arg Ala Asp Arg Gly Ser Val Pro Ile Val Asn
110      85      90      95
113 Leu Lys Asp Glu Val Leu Ser Pro Ser Trp Asp Ser Leu Phe Ser Gly
114      100      105      110
117 Ser Gln Gly Gln Val Gln Pro Gly Ala Arg Ile Phe Ser Phe Asp Gly
118      115      120      125
121 Arg Asp Val Leu Arg His Pro Ala Trp Pro Gln Lys Ser Val Trp His
122      130      135      140
125 Gly Ser Asp Pro Ser Gly Arg Arg Leu Met Glu Ser Tyr Cys Glu Thr
126 145      150      155      160
129 Trp Arg Thr Glu Thr Thr Gly Ala Thr Gly Gln Ala Ser Ser Leu Leu
130      165      170      175
133 Ser Gly Arg Leu Leu Glu Gln Lys Ala Ala Ser Cys His Asn Ser Tyr
134      180      185      190
137 Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr Ser Phe Ser Lys
138      195      200      205
141 <210> SEQ ID NO: 3
142 <211> LENGTH: 42
143 <212> TYPE: PRT
144 <213> ORGANISM: Mus musculus
146 <400> SEQUENCE: 3

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/373,938

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Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF4\12112002\I373938.raw

148 Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
 149 1 5 10 15
 152 Gly Ser Thr Gly Asp Ala Ala His Thr His Gln Asp Phe Gln Pro Val
 153 20 25 30
 156 Leu His Leu Val Ala Leu Asn Thr Pro Leu
 157 35 40

160 <210> SEQ ID NO: 4

161 <211> LENGTH: 627

162 <212> TYPE: DNA

163 <213> ORGANISM: Homo sapiens

165 <220> FEATURE:

166 <221> NAME/KEY: CDS

167 <222> LOCATION: (1)..(627)

168 <223> OTHER INFORMATION:

W--> 171 <400> 4

172 atg agg gcc tgg atc ttc ttt ctc ctt tgc ctg gcc ggg agg gct ctg 48
 173 Met Arg Ala Trp Ile Phe Phe Leu Leu Cys Leu Ala Gly Arg Ala Leu
 174 1 5 10 15
 176 gca gcc cct cag caa gaa gcg ctc gct cac agc cac cgc gac ttc cag 96
 177 Ala Ala Pro Gln Gln Glu Ala Leu Ala His Ser His Arg Asp Phe Gln
 178 20 25 30
 180 ccg gtg ctc cac ctg gtt gcg ctc aac agc ccc ctg tca ggc ggc atg 144
 181 Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser Gly Gly Met
 182 35 40 45
 184 cgg ggc atc cgc ggg gcc gac ttc cag tgc ttc cag cag gcg cgg gcc 192
 185 Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala Arg Ala
 186 50 55 60
 188 gtg ggg ctg gcg ggc acc ttc cgc gcc ttc ctg tcc tcg cgc ctg cag 240
 189 Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg Leu Gln
 190 65 70 75 80
 192 gac ctg tac agc atc gtg cgc cgt gcc gac cgc gca gcc gtg ccc atc 288
 193 Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala Val Pro Ile
 194 85 90 95
 196 gtc aac ctc aag gac gag ctg ctg ttt ccc agc tgg gag gct ctg ttc 336
 197 Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu Ala Leu Phe
 198 100 105 110
 200 tca ggc tct gag ggt ccg ctg aag ccc ggg gca cgc atc ttc tcc ttt 384
 201 Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile Phe Ser Phe
 202 115 120 125
 204 gac ggc aag gac gtc ctg agg cac ccc acc tgg ccc cag aag agc gtg 432
 205 Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln Lys Ser Val
 206 130 135 140
 208 tgg cat ggc tcg gac ccc aac ggg cgc agg ctg acc gag agc tac tgt 480
 209 Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu Ser Tyr Cys
 210 145 150 155 160
 212 gag acg tgg cgg acg gag gct ccc tcg gcc acg ggc cag gcc tcc tcg 528
 213 Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln Ala Ser Ser
 214 165 170 175
 216 ctg ctg ggg ggc agg ctc ctg ggg cag agt gcc gcg agc tgc cat cac 576

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```

217 Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser Cys His His
218      180      185      190
220 gcc tac atc gtg ctc tgc att gag aac agc ttc atg act gcc tcc aag      624
221 Ala Tyr Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr Ala Ser Lys
222      195      200      205
224 tag      627
227 <210> SEQ ID NO: 5
228 <211> LENGTH: 208
229 <212> TYPE: PRT
230 <213> ORGANISM: Homo sapiens
232 <400> SEQUENCE: 5
234 Met Arg Ala Trp Ile Phe Phe Leu Leu Cys Leu Ala Gly Arg Ala Leu
235 1      5      10      15
238 Ala Ala Pro Gln Gln Glu Ala Leu Ala His Ser His Arg Asp Phe Gln
239      20      25      30
242 Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser Gly Gly Met
243      35      40      45
246 Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala Arg Ala
247      50      55      60
250 Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg Leu Gln
251 65      70      75      80
254 Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala Val Pro Ile
255      85      90      95
258 Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu Ala Leu Phe
259      100     105     110
262 Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile Phe Ser Phe
263      115     120     125
266 Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln Lys Ser Val
267      130     135     140
270 Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu Ser Tyr Cys
271 145     150     155     160
274 Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln Ala Ser Ser
275      165     170     175
278 Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser Cys His His
279      180     185     190
282 Ala Tyr Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr Ala Ser Lys
283      195     200     205
286 <210> SEQ ID NO: 6
287 <211> LENGTH: 35
288 <212> TYPE: PRT
289 <213> ORGANISM: Homo sapiens
291 <400> SEQUENCE: 6
293 Met Arg Ala Trp Ile Phe Phe Leu Leu Cys Leu Ala Gly Arg Ala Leu
294 1      5      10      15
297 Ala Ala Pro Gln Gln Glu Ala Leu Ala His Ser His Arg Asp Phe Gln
298      20      25      30
301 Pro Val Leu
302      35
305 <210> SEQ ID NO: 7

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RAW SEQUENCE LISTING

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TIME: 14:39:02

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF4\12112002\I373938.raw

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306 <211> LENGTH: 8
307 <212> TYPE: PRT
308 <213> ORGANISM: Homo sapiens
310 <400> SEQUENCE: 7
312 Ala Pro Gln Gln Glu Ala Leu Ala
313 1 5
316 <210> SEQ ID NO: 8
317 <211> LENGTH: 38
318 <212> TYPE: DNA
319 <213> ORGANISM: Artificial Sequence
321 <220> FEATURE:
322 <223> OTHER INFORMATION: Primer
324 <400> SEQUENCE: 8
325 actggtgacg cggcccatatc tcatcaggac tttcagcc 38
328 <210> SEQ ID NO: 9
329 <211> LENGTH: 32
330 <212> TYPE: DNA
331 <213> ORGANISM: Artificial Sequence
333 <220> FEATURE:
334 <223> OTHER INFORMATION: Primer
336 <400> SEQUENCE: 9
337 aagggtatc gatctagctg gcagaggcct at 32
340 <210> SEQ ID NO: 10
341 <211> LENGTH: 20
342 <212> TYPE: DNA
343 <213> ORGANISM: Artificial Sequence
345 <220> FEATURE:
346 <223> OTHER INFORMATION: Primer
348 <400> SEQUENCE: 10
349 cactgcttac tggcttatcg 20
352 <210> SEQ ID NO: 11
353 <211> LENGTH: 26
354 <212> TYPE: DNA
355 <213> ORGANISM: Artificial Sequence
357 <220> FEATURE:
358 <223> OTHER INFORMATION: Primer
360 <400> SEQUENCE: 11
361 ctgatgagta tgggccgcac cagtgg 26
364 <210> SEQ ID NO: 12
365 <211> LENGTH: 29
366 <212> TYPE: DNA
367 <213> ORGANISM: Artificial Sequence
369 <220> FEATURE:
370 <223> OTHER INFORMATION: Primer
372 <400> SEQUENCE: 12
373 ctgatgagta tgggccgcgt caccagtgg 29
376 <210> SEQ ID NO: 13
377 <211> LENGTH: 23
378 <212> TYPE: DNA

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/373,938

DATE: 12/11/2002
TIME: 14:39:03

Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF4\12112002\I373938.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/373,938

DATE: 12/11/2002

TIME: 14:39:03

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF4\12112002\I373938.raw

L:28 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:25

L:171 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:4,Line#:168